

May 8, 1849.

Harpur Gamble, Esq., M.D., in the Chair.

The Secretary reported that living specimens of *Ptilinopus melanocephalus*, *Platyercus Barnardi*, *Lanius septentrionalis*, and *Dasyprocta Azaræ*, had been purchased for the Menagerie; that a Hog-Deer fawn and a Chinchilla had been produced in the Gardens; and that a beautiful example of *Equus hemionus* from Cutch, presented by the Hon. Sir T. Erskine Perry, Chief Justice of Bombay, had been brought to England free of expense in the Peninsular and Oriental Steam Navigation Company's ship 'Pottinger.'

Among the correspondence were letters from the Lord Harris, Governor of Trinidad, the Hon. C. A. Murray, and Lieut. Tyler, R.E. (Sta Lucia).

The following papers were read:—

1. ON A VERY LARGE ROE-DEER (*C. leucotis*) IN THE COLLECTION OF THE EARL OF DERBY. BY J. E. GRAY, ESQ., F.R.S. ETC.

(Mamm. Pl. XII.)

The President has sent for exhibition a stuffed specimen of a female Deer, which has lately been obtained by him from Valparaiso, and is a native of South America. It evidently belongs to the genus *Capreolus* or Roebucks.

I may observe that most of the groups into which the Deer have been divided are strictly geographic divisions; the only exception is in the Stags, or the restricted genus *Cervus*, one species of which is found in America. The following animal appears to be a similar example in the genus *Capreolus*, which has hitherto been restricted to species found in the Old World.

In size it agrees with the specimens of the male Ali or *C. pygargus* from Siberia in the British Museum collection, being at least three times as large as the usual European Roebucks; but it differs from that species in being much darker, in not having the white spot which extends over the upper part of the sides of the haunches, and in having the greater part of the front of the chin and a spot on each side of the upper lip white, instead of the lip and chin being nearly black, as in that species.

In all the characters above noted it agrees with the European Roebuck, as it also does in the greater stoutness of the legs and the greater length of the face. Indeed I can see no difference between it and the European Roebuck, except in the greater size, the greater length of the quills, and their more distinct and broader subterminal yellow bands, and in the hair on the inside of the ears being whiter; but in the latter character it also differs from *C. pygargus*.

I think it may be distinguished by the provisional name of *C. leucotis*.



DEER OF THE SIBIRIAN MOUNTAINS



Sundevall observes of *C. pygargus*, "A priori (*C. Europæus*) non minus differt quam omnes Cervi indici inter se; hi igitur, non minus quam ille, distinguendi, sed rectius forsân ut meræ varietates habendi."—*Pecora*, 61.

I have seen six specimens of the Ural species, and they were all alike, and very distinct from any variety of the European Roebuck I have seen, especially in the form of the head and the extension of the white disk over the sides of the rump, forming a broad oblong white spot; while in the European species it is an erect longitudinal disk only, occupying the back part of the haunches.

The height at the shoulder of Lord Derby's specimen is 38 inches. His Lordship's correspondent states, "It was brought to Valparaiso by Don Benjamin Munoz, a Commodore in the Chilian Navy. The animal was shot by one of the Chileno officers about twenty leagues from Port Famine in the Straits of Magellan. The Indians assured the officer that there was another similar kind of Deer there, but quite white. He did not see any of them, but the other kind (*C. leucotis*) did not seem uncommon."

2. ON THE GENUS BRADYPUS OF LINNÆUS. BY JOHN EDWARD GRAY, ESQ., F.R.S. ETC.
(Mammalia, Pl. X. XI.)

Illiger, and afterwards F. Cuvier, divided the Linnæan genus *Bradypus* into two, according to the number of the claws and the absence or presence of the canine, and the form of the crown of the grinders.

The examination of the collection of skulls of the family in the collection at the British Museum, has induced me to believe that the recent species may be divided into three very distinct subdivisions, and that there are at least seven distinct species.

Synopsis of Genera.

1. CHOLÆPUS.—Hands two-clawed, feet three-clawed; front grinder large, like a canine; pterygoid bone rather swollen, sub-vesicular.

2. BRADYPUS.—Hands and feet three-clawed; front grinder small; pterygoids swollen, hollow, vesicular.

3. ARCTOPITHECUS.—Hands and feet three-clawed; front grinder small; pterygoids compressed, crest-like, solid.

I. CHOLÆPUS, Illiger (1811); *Bradypus*, *F. Cuvier, Dent. Mamm.* t. 77; *Bradypus*, sp. *Linn.*; *Tardigradus*, sp. *Brisson.*

Hands two-clawed, feet three-clawed. Grinders: front upper and lower large, like canines; the upper ones separated from the other grinders by a broad space, with a deep concavity in front, at the back edge of the teeth. Intermaxillary bones small, distinct, and produced in front, with a long canal behind them; pterygoid bones separate, rather swollen, spread out on the sides, thick, with a moderate internal vesicular cavity.

Lower jaw much-produced in front between the teeth.

The skull of this genus is well-figured by M. Cuvier, *Oss. Foss.* v. No. CXCIV.—PROCEEDINGS OF THE ZOOLOGICAL SOCIETY.

t. 5, and M. De Blainville, *Ostéograph. Bradypus*, t. 1 ; skeleton, t. 3. f. 1, 2, old and young skull.

1. *CHOLÆPUS DIDACTYLUS*.

Bradypus didactylus, *Linn.* ; *Cuvier, Oss. Foss.* v. 73. t. 6 ; t. 7. f. 3, 5 ; skull, cop. *Cuvier, Règ. An. Illust.* t. 70. f. 2 ; *Blainv. Ostéog. Bradypus*, t. 1. t. 3. f. 13 ; *Guérin, Icon. R. A.* t. 33. f. 2-2 a, skull.

B. Unau and B. Curi, *Link.*

We have three more or less perfect skulls from different-aged individuals of this species.

The projection in the front of the lower jaw in the young specimen is narrow and acute ; it then becomes thin, wider and rounded at the end, and in the adult skull it is thickened, prolonged, and again becomes rather more acute.

In the adult skull there are very large air-cavities between the parietes of the bones, and a considerable cavity in the pterygoid bone.

In the younger skull the pterygoid bone is small, and appears to be nearly solid, but there is a very large circular perforation which communicates with a cavity under the pterygoid bones, which is nearly entirely obliterated in the adult skull ; and the intermaxillary bones of the two young skulls are much less projecting than those of the adult one.

The young skull exhibits a small, distinctly tapering, produced, additional central nasal bone, which is not preserved (or not to be found) in the adult one, or in any of the other skulls of the family which have come under my observation.

The hinder angle of the lower jaw of the two skulls, the one of a young and the other of an adult animal, in the Museum collection, is nearly similar in form. The condyloid process of the young is short and truncated behind, that in the older jaw being produced and bent back at the tip.

In the British Museum collection there are five skins of adults, two very young, one dry, the other in spirits, and three skulls more or less perfect.

The very young specimen in spirits in the British Museum is figured in Griffith's *Animal Kingdom*, and Seba figures the *fœtus* from spirits.

II. *BRADYPUS*. ? *Acheus pars*, *F. Cuvier, Dent. Mamm.* t. 78 ; *Guérin. Bradypus pars*, *Linn.* *Bradypus*, *Illiger. Tardigradus*, sp. *Brisson. Arctopithecus*, *Gesner.*

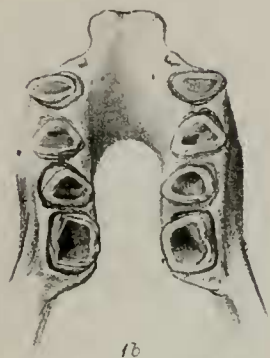
Hands and feet three-clawed. Skull flattened above on the forehead. Grinders : front upper small, cylindrical ; front lower small, transverse, compressed. Intermaxillary bones none, or very rudimentary. The upper process of the zygomatic arch with a broad process in front, forming a back edge to the orbit. Pterygoids separate, much-swollen and raised, very thin, enclosing a large vesicular cavity.

Lower jaw produced in front between the teeth, flattened.

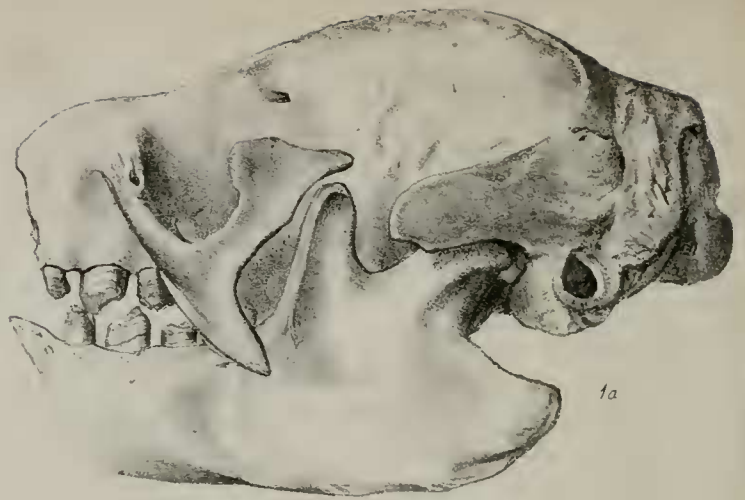
Cuvier, Oss. Foss. v. 88, described the skull of this subgenus.

Blainville (Osteograph. Bradypus, t. 3) figured an imperfect skull of a young animal under the name of *B. torquatus*, but it does not

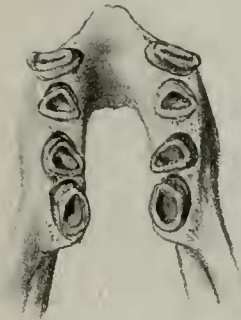




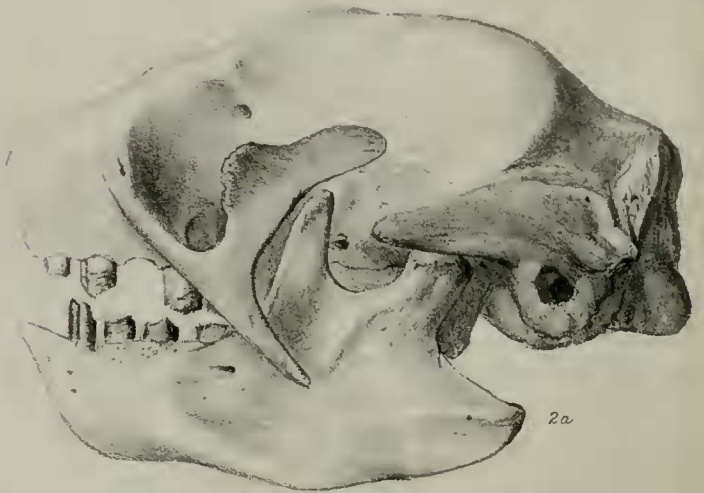
1b



1a



2b



2a



1c



2c

1 BRADYPUS CRINITUS. 2 B AFFINIS.

show the characters of the pterygoid process, and it has no appearance of the anterior process on the upper part of the zygomatic arch forming the upper hinder part of the orbit, which is found in most of the skulls of this genus. This skull may be the one described by Cuvier, as M. Blainville observes that the skull he figures formed part of the old collection, and was taken from a skin collected in Brazil by M. Delalande.

1. BRADYPUS CRINITUS.

(*Skull, Mammalia, Pl. X. f. 1. a, b, c.*)

Greyish, sides reddish; back of the neck with a mane formed of elongated black hairs.

B. crinitus, *Browne, Jam.* 489.

B. tridactylus, *Linn. Am. Acad.* i. 487; *Syst. Nat.*; *Shaw, Mus. Lever.* t. 3; *Nat. Misc.* t. 5; *Griffith, A. K.* v. t. 135.

B. tridactylus, var. *c. Desm. Mamm.*

? "*B. variegatus, Schinz. Cuvier, Thierre*, iv. 510" ?

B. torquatus, Illiger, Prod. 109; "*Temm. Ann. Gen. Sci. Phys.* vi. 212. t. 91;" *Fischer, Syn. Mamm.*; *Geoff. Ann. Mus.*

Acheus torquatus, "*Geoff. Guérin, Iconog. R. A.* t. 33. f. 1 & 1 a, skulls.

B. cristatus, "*Temm. MSS.*" *fide H. Smith, Griff. A. K.* iv. 271.

Ai à collier, Cuvier, Oss. Foss. v. 88.

Three-toed Sloth, *Penn. Syn.* t. 29 (from B.M.).

Ignarus, Clusius, Exot. 110 fig. 372 fig.

Unau, Laet. Amer. 618. f. 618. cop. *Clusius* fig. at p. 372.

Ai sive Ignarus, Marcgrave, Brazil, 221. fig. cop. *Clusius*, 372.

Hab. British Guiana; *Schomburgk.*

This is evidently the species described and figured by Clusius (*Exot.* 111), for he observes, "*Collum non adeo crassum ut pictura refert, quia oblongioribus densisque pilis, quemadmodum et totum corpus, tectum erat: pilorum color ex fusco quodammodo spadiceus, sive potius qualis fere in crassiore illa lanugine magnas et crassas Indicas nuces tegente conspicetur;*" and better described and figured at p. 373 as follows: "*Universum corpus a summo capite ad unguis usque, densissimis usque prolixis villis erat obsitum, coloris partim nigri, partim cineracei, pæne ut meles, quem vulgus tassum sive taxum appellat, mollioribus tamen, atque a collo secundum dorsi longitudinem, usque ad posteriora fere crura, nigrorum pilorum quadam serie erat insignitum: totum collum a cervice ad anteriora usque crura veluti juba quadam nigrorum crinium in utrumque latus propendentium tectum habebat.*"

Marcgrave gives a copy of the second figure in Clusius (at p. 221), but with a rather different description, viz. "*Totum corpus prolixis et duo digitos pæne longis pilis est vestitum cinerei coloris. Tarsi similis sed mollioribus et cum abbedine nucis in dorso pilis magis albescunt et per medium dorsi tendit linea fusca a capite, per colli longitudinem pilis jubæ modo ad latera explicantur paulo longiores quam in reliquo corpore.*" (p. 221.)

The forehead (of the skull) flat over the orbit, rather concave between the front of the temple, wide and rather depressed over the

occiput. The pterygoid bones much-swollen, very thin, paper-like. The lower jaw with a broad square truncated process in front between the teeth, the sides converging, with the outer edge reflexed; the angle broad, acute, slightly produced beyond the back edge of the condyles. Teeth large, broad, the lower front one oblong, transverse: the lower process of the zygoma broad, flat, dilated.

The skull is easily known from the next by being much wider in all its parts compared with its length; this is especially visible at the occipital ridge and the palate, and on the under side of the lower jaw.

The *Sloth* figured by Edwards (Gleanings, t. 310) is from a badly-preserved specimen in the collection of Lord Peters, brought from Honduras. It appears to belong to this species, being the only one having long hair on the neck, but the black colour of this crest is not mentioned in the description.

Bradypus tridactylus, Linnæus, was first described by that author in the *Amœnitates Acad.* i. 487, but the description is so slight that it is not possible to determine with certainty the specimen for which it is intended, the only specific character being the following: "*facie vero pilis flavis vestitum; gula flava, totum corpus ursorum instar, pilis longis et asperioribus vestitur colore ex fusco sive griseo et albo variante.*" In the *Mus. Adolph. Fred.* p. 4, Linnæus refers to this description. The mixed colours of the first description and the habitat Surinam best agree with this species.

Gmelin merely described this species as "*Corpus pilosissimum griseum, facies nuda, gula flava.*"

Browne (Jamaica) mentions it as an animal which is sometimes brought from the mainland to Jamaica (not as a native of the island); his name at once shows that it must belong to this species.

The skull above described was taken from the skin of a specimen in the British Museum. We have also a skeleton of a second specimen, which was received from M. Becker under the name of *Bradypus torquatus*, from Brazil. It is the skull of this skeleton (it being more perfect than the former) that is figured in tab. X. f. 1. *a, b, c.*

2. BRADYPUS AFFINIS.

(*Skull, Mammalia, Pl. X. f. 2. a, b, c.*)

Fur unknown.

The forehead of the *skull* rather convex, with a slight convexity over the orbits and a higher convexity over the front part of the temples. The occipital ridge very concave and rather narrow. The pterygoid bones rather swollen, rather compressed on the sides, and moderately thick. The lower jaw with a broad, gradually tapering, truncated process in front between the teeth; the sides rather curved, simple-edged beneath; the angle broad, acute, slightly produced beyond the back edges of the condyles. The lower process of the zygoma slender, tapering. Teeth moderate, the lower front one much-compressed, transverse, linear.

Hab. Tropical America.

The skeleton from which this skull has been described and figured was received by the British Museum from M. Brandt, under the name of *Bradypus torquatus*, from Brazil.

It has been suggested that the two skulls in the Museum which have been extracted from skins of *Bradypus crinitus*, may both belong to male or female animals, and that the skull here described may belong to the other sex. As this is a matter of doubt which can only be settled by the examination of more specimens the sexes of which are known, I have considered it desirable that the skull should be figured and described. I may remark that the form of the hinder side and angle of the lower jaw of all the three specimens of these skulls are very similar.

<i>Skull.</i>	<i>B. torquatus.</i>		<i>B. affinis.</i>	
	in.	lin.	in.	lin.
Length	2	9½		
Length of palate	1	2		
—— from palate to occipital hole .	1	4		
Breadth at occipital ridge	1	4½	1	2½
—— at front of ear-hole	1	5	1	2½
—— at front of zygoma	1	10	1	8
<i>Lower jaw.</i>				
Length	2	4	2	2½
Width at condyles	1	8	1	4½
—— of back part of them	0	11	0	10

III. ARCTOPITHECUS. *Bradypus*, sp. *Rüppell*; *Pr. Max.*; *Cuvier*, *Oss. Foss.*; *Blainv.* *Acheus*, *F. Cuvier*, *Dent. Mamm.* t. 78. *Tardigradus*, sp. *Brisson*.

Hands and feet three-clawed. Skull rounded above on the forehead. Grinders: front upper very small, cylindrical; front lower smaller than the others, subcylindrical. Pterygoid separate, compressed, erect, thin, simple. Intermaxillaries none.

Lower jaw not produced on the upper edge between the teeth, but slightly keeled in front of the chin.

Face with a black streak from the back angle of the eye.

Cuvier, *Oss. Foss.* v. t. 4, figured the skeleton, and t. 5, the skull and bones of the feet of this genus; the skull is copied R. A. *Illust.* t. 70. f. 1 a. *Wiedemann*, *Arch. Zool. und Zoot.* i. t. 1 and 1*, and *Spix*, *Cephal.* t. 7. f. 12, figure the skull, and *Blainville* figured two skulls belonging to this genus in his 'Osteographia.'

In the young skull there is sometimes a slight projection on the front edge of the zygomatic arch, assisting to form the back edge of the orbit, but this process seems soon to disappear as the animal increases in size, and I have not found it in any of the older skulls.

Cuvier, *Desmarest*, and most French authors, have considered all the individuals of this genus as belonging to one species, and have given an indefinite description, so as to include them. *Cuvier* (*Règ. Anim.* ed. 1. 217) thus describes that species: "Sa couleur est grise, souvent tachetée sur le dos de brun et de blanc: plusieurs individus portent entre les épaules une tache d'un fauve vif que traverse une ligne longitudinale." He refers for the species to both *Buffon's figures*, xiii. t. 5 & 6. In the second edition he remarks, "On connaît un *Ai* dit la *dos brûlé*, parce qu'il a entre les épaules une tache noire en-